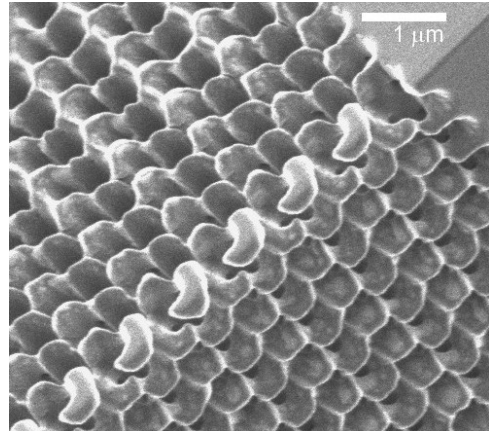


### 3D Photonic structures fabricated by Focused Ion Beam milling

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Photonic crystals with a diamond structure are exciting structures since they are predicted to have a large photonic band gap. We present a new way to make these structures by using a versatile Focused Ion Beam (FIB). A pattern of pores with a diameter of 400 nm was milled in two perpendicular directions in a gallium phosphide wafer. A diamond-like structure of interconnected pores was made in this way (see figure). The correct alignment of the pores is crucial in obtaining a true diamond-like structure. We discuss means to solve this problem.



*SEM-picture of a 3D diamond-like photonic structure realized using FIB. The structure is 16 layers thick, which is twice the thickness realized elsewhere.*